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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,767	02/24/2005	Stefan Lindberg	1501-1260	2938

466 7590 10/06/2006

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EXAMINER

SUAREZ, FELIX E

ART UNIT	PAPER NUMBER
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2857

DATE MAILED: 10/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/501,767

Applicant(s)

LINDBERG ET AL.

Examiner

Felix E. Suarez

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19, 21-33 and 35-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-19, 21-33, 35-44, 46-53 and 56 is/are allowed.
- 6) ☒ Claim(s) 45, 54, 55 and 57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>24Apr2006, 11Aug2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 45, 54, 55 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Discenzo (U.S. Patent No. 6,326,758) in view of Blemel (U.S. Patent No. 6,938,177).

With respect to claim 45, Discenzo teaches an apparatus for analyzing the condition of a machine having a rotating shaft, comprising:

a plurality of inputs for receiving measurement data from sensors for surveying measuring points of the machine (see col. 4, lines 55-66), said measurement data being dependent on rotation of said shaft (see col. 8, lines 16-24);

data processing means for processing condition data dependent on said measurement data, said data processing means comprising means for performing a plurality of condition monitoring functions (see col. 8, lines 57-66), wherein

said data processing means includes a Field Programmable Gate Array circuit coupled to said plurality of inputs (see col. 14, lines 60-67).

Discenzo does not teach:

a plurality of memory segments for storing program code;

first program code means, stored on a first one of said memory segments, which when run on said Field Programmable Gate Array circuit causes the condition analysis apparatus to execute a first condition monitoring function; and

second program code means, stored on a second one of said memory segments, which when run on said Field Programmable Gate Array circuit causes the condition analysis apparatus to execute a second condition monitoring function; and

wherein said apparatus is adapted to allow parallel processing of said first program code means and said second program code means on said Field Programmable Gate Array circuit so as to achieve simultaneous execution of at least two condition monitoring functions.

But Blemel teaches that, a Field Programmable Gate Array (FPGA) has the ability to be reprogrammed from non-volatile memory, by the microcontroller, or through a serial port. This enables the parallel activities of the FPGA to be constructed on the fly and personalized with a variety of unique programs and data, such as serial codes, calibration coefficients, or a reduced traveler containing process history. Accordingly, the FPGA has the ability to be dynamically configured as a processor with extended mathematical or logical precision (see Blemel; col. 8, lines 5-15).

Blemel also teaches that, the FPGA operates either under control of a microprocessor or, can be operated independently. The FPGA provides the ability to use internal parallel processing (see Blemel; col. 7, lines 41-46).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Discenzo to include a FPGA as taught by Blemel, because the FPGA of Blemel, allows to construct and personalize a variety of unique programs and data, such as serial codes; and the FPGA is configured to monitor analog signal functions (see Blemel; col. 8, lines 16-31); the FPGA of Blemel, allows to operate either under control of a microprocessor or, can be operated independently, and the FPGA of Blemel provides the ability to use internal parallel processing, as desired.

With respect to claim 54, Discenzo in combination with Blemel teach all the features of the claimed invention; and Discenzo further teaches, said data processing means comprises at least two data processing devices co-operating so as to control operation of said condition analysis apparatus, a first one of said data processing device being said Field Programmable Gate Array circuit (see Discenzo; col. 14, lines 52-67).

With respect to claim 55, Discenzo in combination with Blemel teach all the features of the claimed invention; and Discenzo further teaches that, a second

one of said data processing devices operates to control the operation of the Field Programmable Gate Array circuit (see Discenzo; col. 14, lines 52-67).

With respect to claim 57, Discenzo in combination with Blemel teach all the features of the claimed invention; and Discenzo further teaches, said Field Programmable Gate Array circuit is programmable to execute said plurality of condition monitoring functions (see Discenzo; col. 14, lines 60-67).

Response to Arguments

2. This action is responsive to amendment filed July 13, 2006.

3. Applicant's arguments with respect to the claims have been fully considered but new claims 45, 54, 55 and 57 are unpatentable over Discenzo (U.S. Patent No. 6,326,758) in view of Blemel (U.S. Patent No. 6,938,177) of the rejection set forth hereinbefore.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory

action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Allowable Subject Matter

5. Claims 1-19, 21-33, 35-44, 46-53 and 56 are allowable.

6. The following is a statement of reasons for the indication of allowable subject matter:

Claims 1-19, 21-33, 35-44, 46-53 and 56 are allowable because the prior art, particularly Geva (U.S. Patent No. 6,366,871) and Gulati (U.S. Patent No. 6,142,681) fail to teach or suggest an apparatus for analysing the condition of a machine having a rotating shaft, comprising:

wherein said plurality of condition monitoring functions includes a function for misalignment detection;

a display provided on at or in, said apparatus body, wherein said display has a display area of at least 4125 mm²;

wherein said apparatus body has a body volume of less than 1,006,250 mm³;

wherein said apparatus body is portable, said apparatus body being shaped and adapted to enable a one-hand grip, said apparatus body including user interaction means adapted to enable user interaction by means of said one hand; nor

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wherein said apparatus body houses readable and writeable memory means having a storage capacity exceeding 8 megabits.

Conclusion

Prior Art

87. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

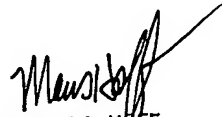
Slates [U.S. Patent No. 6,346,807] describes a rotating shaft monitoring.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Felix Suarez, whose telephone number is (571) 272-2223. The examiner can normally be reached on weekdays from 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on (571) 272-2216. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300 for regular communications and for After Final communications.

September 25, 2006

F.S.


MARC S. HOFF
SUPERVISORY PATENT EXAMINER
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